

WHAT IS CLAIMED IS:

1. An intensity modulator, comprising:

a light source driving circuit for periodically generating an output fluctuation point on a time axis;

5 a light source which is driven by the light source driving circuit so as to output light;

a light passage controller for controlling passage of the light; and

10 a modulation controller for setting predetermined synchronizing periods and a plurality of unit periods with different time lengths in each of the synchronizing periods, controlling passage of the light using the light passage controller at each of the unit periods, and controlling intensity of the light so as to modulate pulse width at each 15 of the synchronizing periods,

wherein the modulation controller selects the unit period, where the intensity error which occurs with the output fluctuation point being inserted is predicted not to be visually recognized with human's eyesight characteristics, from the unit 20 periods, and controls arrangement of the unit periods so that the output fluctuation point is inserted into the selected unit period.

2. The intensity modulator according to claim 1, wherein an occurrence cycle of the output fluctuation point 25 synchronizes with the synchronizing period.

3. The intensity modulator according to claim 1, wherein the modulation controller selects the unit period where the intensity error is predicted so as not to be visually recognized from the unit periods for a level of intensity generated by 30 making the passage control of the light using the light passage controller based on a ratio (intensity error / intensity level) of the intensity error occurring by inserting the output fluctuation point into the unit periods.

4. The intensity modulator according to claim 1, wherein the modulation controller controls the arrangement of the unit periods so that the output fluctuation point is inserted into a unit period with the longest time length.

5. The intensity modulator according to claim 1, wherein the modulation controller adjusts the time length of the unit period, into which the output fluctuation point is inserted, so as to have a length with which the intensity error can be corrected.

10. 6. The intensity modulator according to claim 1, wherein the light source driving circuit comprises an AC power source for switching polarity of the AC power source alternatively at each synchronizing period, and the output fluctuation point is generated when the polarity of the AC power source is switched.

15. 7. The intensity modulator according to claim 1, wherein the light source driving circuit comprises an AC power source for switching polarity of the AC power source alternatively based on a frequency which is obtained by converting a frequency defined by the synchronizing period.

20. 8. The intensity modulator according to claim 1, wherein the light source driving circuit comprises a DC power source for generating an electric current at each synchronizing period.

9. An image display device, comprising:

25. a light source driving circuit for periodically generating an output fluctuation point on a time axis;

a light source which is driven by the light source driving circuit so as to output light;

a light passage controller for controlling passage of the

30. light; and

a modulation controller for setting predetermined synchronizing periods and a plurality of unit periods with different time lengths at each of the synchronizing periods,

controlling passage of the light using the light passage controller at each of the unit periods, and controlling intensity of the light so as to modulate a pulse width at each of the synchronizing periods,

- 5        wherein the modulation controller selects a unit period, where the intensity error which occurs with the output fluctuation point being inserted is predicted not to be visually recognized with human's eyesight characteristics, from the unit periods, and controls arrangement of the unit periods so that
- 10      the output fluctuation point is inserted into the selected unit period.